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TECHNE AND LOGOS IN SOLZHENITSYN

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SOLZHENITSYN IS BETTER EQUIPPED than most contemporary novelists to write on technical subjects. Born in 1918, he was trained in mathematics and physics and lived through Stalin's forced industrialization of the Soviet Union. He rose to the rank of lieutenant and was bent on a military career. In 1943, having dared to criticize Stalin, Solzhenitsyn was sentenced to imprisonment for eight years, several of which he spent in the late 1940's at a special prison for engineers. This experience provided the basis for his depiction of the Mavrino prison institute and acoustics laboratories in *The First Circle*. Solzhenitsyn's fascination with and knowledge of numerous aspects of Soviet technology is evident throughout his work. One thinks of the building of the brick wall in *One Day in the Life of Ivan Denisovich* (the scene that so impressed Khrushchev), the intricacies of prison management and punishment in *Gulag*, the acoustics and x-ray technologies of *The First Circle* and *Cancer Ward*, and the competing interests of technicians and bureaucrats in *For the Good of the Cause*. Yet Solzhenitsyn's works are more than a scientist's account of the catastrophes of technological modernization in the Soviet Union. They are a sustained meditation upon the nature and direction of technology in the modern world.

I

Solzhenitsyn's critique of technology may be examined most profitably in relation to Jacques Ellul's still controversial *The Technological Society* (1954). Ellul rightly defines technology as any standardized means of attaining a purposeful end. It includes not just the machine but also state bureaucracy, institutional and business administration, and numerous other procedures and organizations. First implemented by the state,

since only the state is rich and powerful enough for such a purpose, technology always has unexpected effects. Purely technical needs and requirements come to govern political decisions. Ideology is subordinated to technique, and technological similarities become more significant than the ideological differences between nations. Although its specific direction is unpredictable, technique constantly augments itself and simplifies its procedures, since its "own self-development" is its true *raison d'être*. The inevitable expansion of technique within society facilitates authoritarianism while leading toward collectivism and conformity. Technical ends replace human ends while former ends become mere means. Language, once a distinctive feature of the "human," becomes at best an appendage to quantitative thinking. Everywhere man is swallowed up. Ellul thus argues that technology, which is indispensable to organizing a mass society, has absorbed man and become autonomous. Formerly only a part of civilization, it is now the whole, and everywhere legislates according to its own requirements of know-how, production, and efficiency. Technology dictates to the statesman and the engineer. It is beyond their control. Nor should one argue that technique is good or bad depending on how it is used. An indifferent monolith, technique ignores such categories.¹

Solzhenitsyn implicitly rejects Ellul's idea that modern technology inevitably supersedes or ignores all non-technical ends and all human purposes and controls. Rather, he believes that technology, as the unwilling instrument of politics and ideology, is insufficiently autonomous. Nor does Solzhenitsyn accept Ellul's assimilation of technology with administration and bureaucracy. Throughout his work he contrasts the competent engineers with the bungling meddlers of the Soviet state. Despite these differences, Solzhenitsyn often provides evidence tending to support Ellul's theories of "autonomous" technology.

All of Solzhenitsyn's major works testify to the "most important phenomenon of history," namely "the conjunction of state and technique" (Ellul 233). As Ellul shows, it was under Lenin rather than the more capricious Stalin that the formerly unpredictable art of politics itself became a technique, the sum of its increasingly refined, machine-like, and expanding methods.²

This is not to deny that the full consequences of state technique, as of techniques in general, are unpredictable. In *Gulag*, penal procedures are arrived at by “calculated brutality” and “chance” (G I, 205),³ and the earliest x-ray technology results in unforeseen cancers (CW, 39, 87); still, whatever is effective is retained, and, once installed, techniques are augmented. In the 1930’s Soviet Police Organs refused to tolerate a decline in the number of their enemies, largely the result of their efficiency in interrogation. Lest they “wither away” (G I, 95, 25), the Organs “fabricated” cases and new techniques for working up charges.

Building on underdeveloped Tsarist foundations, the earliest technical procedures of the Soviet state were haphazard, makeshift, arbitrary, and uneconomical. Like Ellul, Solzhenitsyn recognizes that the “dramatic” techniques of terror and violence, though they retain a human if not humane quality, waste energy. He also recognizes with Ellul that these are “transient traits” of the totalitarian state, which as it matures seeks less violent and hence more efficient means of control, such as indoctrination and propaganda (Ellul 287, 30, 31). Initially the Soviet police carried out “theatrical” (G I, 11) but inefficient arrests in Tsarist style, but once the theory of arrest is refined, drama is eliminated along with the requirement of proof for guilt or innocence. Now made to satisfy predetermined quotas, arrests become as efficient as a “roll call” (G I, 10-11). The Soviet judicial system reveals the same economy of means as it is now a mere agent of political technique. With the invention of the predetermined verdict, penalty without appeal and judgment without trial, the law becomes a “machine.” (G I, 291, 285, 101) The speed of these new “technical” (G III, 79) methods is “limited only by the technology of typewriting” (G I, 285). Meanwhile, the Soviet Union has surpassed the Tsarist prisons “of blessed memory” (G I, 133, 466), where methods were unsystematic and humane considerations crept in. Other improvements include the Stolypine van, in which prisoners are herded like “meat” (G I, 528), the “centralized regulation of prison dormitories,” and the deployment of trained informers (FC, 165). As for the work camp, “When slave-driving became a thought-out *system*, pouring water over a prisoner in subzero

temperatures" is recognized as a "useless expenditure of the executioner's energy" (G II, 54).

Technique is for Ellul a monolith, expanding and standardizing everything that comes under its control, including social life. At first the Cheka G.B. surveyed society by means of stool pigeons—an expensive, arduous, and unreliable method. Now it uses the microphone, the tape recorder, and the listening device (G II, 353). Soviet bureaucracy eliminates social differences through a universal passport system, thus purging the noxious class of "betwixt and between insects" (G I, 54). In *Gulag* as in *The First Circle* the "crack" symbolizes those attenuated interstices where private existence clings to life before the final closure of the technological system.⁴

As it approaches the technological norm, each modern state more closely resembles every other, and ideology merely explicates or justifies technically-determined goals (Ellul 281-282, 245). In *The First Circle* Khorobrov remarks that during the Soviet Revolution the assembly line symbolized the "most inhuman aspect" (FC, 499) of capitalist exploitation; embracing American "Taylorism," the Soviets were using it fifteen years later under another name. Although the Soviets call themselves socialists, this designation loses its content as a result of technique. Pursuing rapid modernization, the Soviet state inevitably appropriates from "millions of slaves" (G II, 149) that surplus value which, according to Marx, the capitalist steals from the worker (Ellul 246).⁵

Technology, says Ellul, pursues increasingly simple, uniform, and efficient methods on the principle that the ends justify the means. Human values receive consideration accidentally or when, as in the *First Circle*, they help increase output (Ellul 19-21). These deformations are made more acceptable where man's historical subjectivity is replaced by an "objective" historical ideology. Still clinging to Marxism, the imprisoned philologist Rubin tells Sologdin that the ends justify the means, that all actions should be judged by their "expediency for the working class" (G I, 308). In conversation with Nerzhin, Rubin subsumes all historical evils within an objective dialectic of history. The sacrifice of individuals is negated in the "roundabout," "distorted" (FC, 14), but inevitable progress of Soviet truth. Thus Nerzhin mistakenly judges from "personal experi-

ence” instead of the abstract and “collective experience of humanity” (FC, 40-41). In actuality, the indoctrinated Rubin fails to see that his ideology only justifies the arbitrary practices of a technocratic state.

There might seem to be a refutation of to Ellul’s argument for inevitable technological expansion in the fact that since the 1950’s much of the Gulag Archipelago has been shut down. But Solzhenitsyn fears that the law has only “changed course (for a time)” (G III, 518, 494, 524): it still produces its share of “criminals” and is ready for the “sharpest turn” (G III, 518, 524) in Soviet policy. Indeed, Solzhenitsyn’s explanation for the shutting down of the Gulag implies that technology follows efficiency. Michael Scammell observes that the Gulag was largely abandoned not for ethical reasons, but because “rational calculation” had shown “that it had outlived its usefulness.” Slave labor had been replaced by commerce with the West and the importation of Western technology as the “engine of industrial progress.”⁶

II

Ultimately, however, Solzhenitsyn resists Ellul’s monistic technological pessimism and determinism while denying that the Soviet regime has even remotely achieved efficiency. Ellul acknowledges that the Soviet drive to modernization inevitably resulted in technological confusion, misallocation of resources, inefficiency, and incompetence. But he believes that Stalin, unlike Hitler, observed procedural uniformity, predictability, and the “one best means.” Solzhenitsyn’s contrary view resembles Hannah Arendt’s in *The Origins of Totalitarianism*. According to Arendt, Stalin’s regime (like Hitler’s) subordinated utilitarianism to ideology and the needs of terroristic totalitarian rule. The multiplication of competing offices and the overlapping of functions in the Soviet state undermined competence and responsibility and increased Stalin’s power. The Soviets expanded slave labor camps when it was wasteful to do so, and “filled them with highly qualified” engineers, technicians, and scientists “at a time of shortage of technical skill.” The liquidation of classes proved “positively disastrous” for the economy, while the great Purge was a “wrecking operation.” Arendt notes, as does Solzhenitsyn, the famine that occurred in 1933

with the extermination of *kulaks* and the Stakhanov system which disrupted industry.⁷

Writing of the Five Year Plan, Solzhenitsyn remarks that incalculable amounts of "people's wealth, and strength" were "squandered," while the "best projects were destroyed and . . . the worst were carried out by the worst means" (G I, 383). The fount of incompetence was Stalin, who in 1931 demanded that the Belomor Canal be built almost immediately with forced labor, inadequate materials, and the most primitive techniques: the project resulted in an astonishing waste of life (G II, 91). Elsewhere, the state disturbs the rhythms of science and technology and subjects them to unreasonable requirements. In *The First Circle* Stalin inflicts a one-year deadline on the Mavrino acoustics laboratory for a project that requires ten years. Then state administrators divide the engineers into competing and mutually suspicious groups; ironically the independent Sologdin solves the main problem. Ellul observes that techniques are "always put to immediate use," and technique "cannot tolerate the gropings and slow tempo of science" (Ellul 10, 313); however, in Solzhenitsyn it is the state which is impatient with science and technique.

Solzhenitsyn's favorite example of the opposition between state and technology is the persecution of the "technical intelligentsia," consisting largely of bourgeois engineers from Tsarist days.⁸ They were persecuted because of the state's resentment of their independence and brilliance, its desire to institute its own engineers, its paranoia, and its need to find scapegoats for its own economic failures. Class hatred also played a role.⁹ The 1920's saw the first charges against the engineers (G II, 80, 82). In November 1930, at the trial of the Industrial Promparty, they were charged with sabotage, wrecking, delaying work, misusing material, and limiting production while debating theoretical issues.¹⁰ The state concluded that it was best qualified to direct the economy, and that the engineers should be destroyed as a "caste" (G I, 399.) But in 1931, the silenced but still useful engineers were reintegrated with the state, often in prison institutes.¹¹

According to Solzhenitsyn, wrecking is *alien to the inner structure* (G I, 390) of engineering. His admiration for the first generation of Soviet engineers reflects values which Ellul finds in

early stages of technological development, above all the identification of technology not with mere efficiency but also with the fulfilment of “rational,” humane, and “organic” ends.¹² Solzhenitsyn believes that only a cultivated technician can understand the true ends of man. Tasteful, diffident, and “spiritual” (G I, 197), the old engineers had varied talents (such as painting and music) which enhanced their technological skills.¹³ To quote the anachronistic Dr. Oreschenkov in *Cancer Ward*, “the patient’s “organism isn’t divided,” so that the doctor ought to be an “all-rounder” (CW, 425). In keeping with his organic concept of man, Solzhenitsyn rejects pure instrumentality and demands that technology be governed by ethics. Shalubin, who probably speaks for the author, wants “all relationships, fundamental principles and laws to flow directly from ethics and from them alone” (CW, 442).¹⁴

These values declined in the 1930’s as the state moulded its own engineers. In *Gulag I*, Solzhenitsyn meets a once powerful but now imprisoned engineer typical of the new generation. This narrow specialist is marked by submissiveness to the state, cold efficiency, and illiteracy; he had never read a book, and thought Canadian a language. In the eyes of the Soviet state, the bureaucrat is the engineer’s antithesis. Rusanov, the personnel expert in *Cancer Ward*, thinks himself more than a “narrow specialist” unlike the engineers he controls, who merely “coped with the technical side” (CW, 177). The irony is that the state promotes overspecialization, and its administrators lack a general view. Writing of Beria and Abakumov, Solzhenitsyn observes that “their branch of service does not require them to be educated people of broad culture and broad views—and they are not.” His comment that they cannot “think logically” (G I, 145) carries a mathematician’s resentment at the “condescending” (G II, 83) bureaucratic pretension to a so-called science of politics. Solzhenitsyn would subordinate the bureaucrat to the engineer.

Solzhenitsyn’s technocratic ideal resembles Veblen’s in *The Engineers and the Price System*. Ideally the engineer and scientist should be professionally autonomous, apolitical, and yet politically dominant; interference by management or by the state only impedes efficiency.¹⁵ Almost certainly expressing Solzhenitsyn’s sentiments, Obadovosky in *August, 1914* claims

that the Union of Engineers could “easily become . . . more important and constructive than any political party.” He promises that in ten years “of peaceful development . . . you won’t recognize Russian industry—or Russian agriculture for that matter” (1914, 571-72). In *Gulag*, Solzhenitsyn projects a State Planning Commission of Engineers to correct politicians’ stupidities while defending quality, the “heart of technology” (G I, 393). These engineers will “intelligently direct” society’s activities (G I, 390-91). He adds that, apart from “the question of . . . moral leadership,” this is precisely where all social cybernetics is leading society today.”¹⁶

The idea that cybernetics is imminent and that politics must follow technology is reminiscent of Ellul. But unlike Ellul, Solzhenitsyn considers engineering a higher technique than politics, which is perhaps not even a true technique. Beleaguered by the state, technique is not autonomous enough; social cybernetics should be run by morally sensitive engineers. By contrast, in calling technique autonomous Ellul says that the state is the embodiment of technique. The conflict between the Russian engineer and the state is thus between two kinds of technique, neither of which understands the other, and each of which seeks inevitably to extend its power. The engineer, says Ellul, tries to solve immediate technological problems; the state technician coordinates many techniques in relation to long-range goals which the engineer may not realize. Given this conflict of interests, Ellul believes that the Soviet engineers may have engaged in sabotage to obstruct the Stalinist state (Ellul 255-58).¹⁷ As for the argument that the Stalinist state was inefficient, Ellul insists that dictatorship, however wasteful, is the most efficient means of rapid technological development, and that Stalin largely followed technological requirements. For all its unjustifiable human cost, the great industrial leap of the Soviet Union occurred under Stalin.¹⁸

Is it possible, as Solzhenitsyn believes, to restore a humanistic ideal of engineering? For Ellul, technique inherently increases specialization. He says we are in the last stages of the conflict between technique and humanism. Though ethical and humanistic considerations once affected technical questions, human ends are now subsumed by technical means whose “principal characteristic” is the “refusal to tolerate moral judg-

ments.” And, while it always follows the “one best means,” larger rational ends are irrelevant to it. Finally, Ellul denies that technique requires a “civilized man.” “Whatever hand uses it, produces its effects.”¹⁹

Despite his technocratic idealism, Solzhenitsyn feels enormous ambivalence toward modern technology. Stephen Carter notes that Solzhenitsyn identifies it with dehumanization, depersonalization, over-centralized government, excessive speed, the imposition of official ideology (as propaganda), and loss of contact with Nature. Nor does Solzhenitsyn put his faith in the reconciliation of East and West through the “convergence” of their technological systems, for this can only further entrench what Marcuse calls the “totalitarian universe of technological rationality.” He believes that both spheres are heading toward ecological disaster.²⁰ Solzhenitsyn’s proposed remedy appears in his 1974 *Letter to the [Soviet] Leaders* and his essay “Repentance and Self-Limitation” in *Under the Rubble*. He condemns internal combustion engines and heavy industry, celebrates a pastoral environment of gardens and houses, and envisions an economy of small-scale enterprise. He also desires a return to Russian Orthodox traditionalism. Still, he believes such goals are compatible with advanced technology and continued resource exploitation. What is required is a change of ideology and moral values throughout society, in which technology will come to be pursued in a spirit of ethical responsibility and self-control. This attitude is consistent with Solzhenitsyn’s tendency to blame the bad effects of technology in Russia on Marxist ideologues.²¹

From Ellul’s perspective, it is a mistake to suppose that advancing technology can be checked within human and moral limits. A new ideology cannot transform technology when technology has already transformed ideology into its instrument. Philip Rahv also finds Solzhenitsyn’s love of modernization and efficiency at odds with his appeal to a religion-centered (and technologically backward) Russian tradition.²² And yet Solzhenitsyn somehow does not view Russian tradition as incompatible with technology. The best of Russia’s early technology is represented by the idyllic Solovetsky monastery, the site of one of the prisons in the Gulag. Here, in the sixteenth century, Filipp-Kolychev, who “had raised his voice”

against Ivan the Terrible, introduced "a system of agricultural technology . . . that even three centuries later would have been respectable anywhere" (G II, 27n). This implausible episode suggests a possible marriage of modern technocracy with Russia's earlier religious humanism.

Solzhenitsyn's dream of technocracy may also seem implausible. Despite their purported all-roundedness, engineers as a class lack competence in politics, which is more difficult than Solzhenitsyn believes. Ellul says that engineers are "never anything but executive agents," who need the state to co-ordinate and direct their efforts (Ellul 256). Nor would the engineers be likely to apply technique morally or disinterestedly if they were in power. Would they not be bound by the same technological imperatives which dictate to the state?²³

On the other hand, it would be wrong to embrace Ellul's claim that technology now forms an autonomous global monolith. Kendall Bailes and Langdon Winner deny that technology determines Soviet history; like Solzhenitsyn, they recognize that Marxist ideology still plays a crucial role in domestic and foreign policy.²⁴ It would be no less premature to claim that technology has eliminated key ideological, institutional, legal, and social differences between the United States and the Soviet Union. Solzhenitsyn, whose monistic theory of history pessimistically envisions the final triumph of communism, refuses to equate the capitalist and liberal West with the socialist East. In his 1975 Washington address to American workers he notes that strikes are illegal in the Soviet Union and that trade unions are now integrated into the state apparatus.²⁵ Such measures remain foreign to the dominant liberal ideology of the United States. While "free speech" in the United States is less free than is often believed, it still rejects state censorship on ideological grounds. Nor can the American judicial system be equated with that of the Soviet Union. Courts in this country remain largely independent of the state, whereas, as Solzhenitsyn well knows, the integration of the Soviet judiciary with the Soviet government helped to produce the horrors of the Gulag, thus far unknown on American soil.

III

Perhaps the key difference between Solzhenitsyn and Ellul lies in their contrasting views on the relation between technology and language. Ellul believes that language has largely become a part of technique and now chiefly serves functional, technocratic ends. This development is inevitable, for technology is ruled by number and is thus anti-linguistic. Though it specifies a universe of discourse, it seeks the elimination of the human, and reasoned debate over purposes tends to obstruct rapid application of technical procedures (Ellul 74, 132, 342, 271).

Solzhenitsyn knows that in Soviet Russia language is an instrument of politics, production, and "social prophylaxis" (G I, 42). When the state needs to purge the engineers, it invents the false charge of "wrecking." When it needs to get rid of the peasantry, it defines them as *kulaks*, a term formerly applied to disreputable social types (G I, 55-7). In *Cancer Ward*, the euphemisms for cancer stand for the distortions of language throughout Soviet life.²⁶ But the debasement of language is best typified by Stalin, who in *The First Circle* describes language as "an instrument of production like, well like lathes, railroads, the mail" (FC, 112).

Solzhenitsyn nonetheless denies that contemporary technique must reduce language to a mere instrument. This denial is rooted in a conception of technique which links him, perhaps reluctantly, with Western classicism and humanism.²⁷ In Aristotle *techne* is never the all-absorbing end of life but one of its many means. Nor is it any means to attain any end. *Techne* is ruled by *nous* or reason. Since technique is subordinate to language, it must be pursued according to what Aristotle calls a "true idea," whether of material objects or of human ends; language is essential to determining a true hierarchy of ends and the true relation between instruments and purposes.²⁸

Is *techne* in fact synonymous with technology? Aristotle refers to *techne* as an art or craft, a form of *poesis* or making. Not only does it reflect a craftsman's ideal of total participation in work, it also accepts an element of the contingent in the process of production.²⁹ It is also based on a determinate relation between tool and use, means and ends. Solzhenitsyn's admiration of the Solvetsky monastery suggests a nostalgia for craft.

By contrast, modern technology consists of large-scale interdependent organizations seeking predetermined results by means of thoroughly systematic, impersonal, and invariable methods.³⁰ Because this enormous system follows an unpredictable logic different from that of means and ends, tools and uses, and apart from linguistic values, Ellul considers it a mistake to look to the classical tradition for the solution of modern technological problems (Ellul xxix).

In any case, Solzhenitsyn's critique of technology is inseparable from logocentrism, from his faith in language as the vehicle of reason and truth. He entirely accepts the major logocentric assumption of the possibility of an equivalence between signifier and signified. The great theme of his work (and life) is the ultimate triumph of verbal truth against political falsehood. Donald Fanger remarks that Solzhenitsyn provides an "extensive gloss" of Mandelstam's statement that "social distinctions and class oppositions pale before the present division of people into friends and enemies of the word." Solzhenitsyn honors Gogol's dictum that "one must treat the word honestly; it is God's highest gift to man."³¹

During the Industrial Promparty trials the superiority of the old engineers is evident in their language: "Even the terrified, tired tongues manage[d] to name everything with its proper name and to tell us everything" (G I, 379). This ideal of correct denominations explains Solzhenitsyn's hatred of Marxist dialectic as an instrument for committing and concealing evil; he prefers the verities of Russian folk wisdom (G I, 60). There is moreover a link between false language and bad technique. "Violence does not and cannot exist by itself," asserts Solzhenitsyn in his Nobel lecture; "it is invariably intertwined with the lie."³² Hence Solzhenitsyn's disgust with Maxim Gorky, who mocked the "verbal trumper of humanism" with the remark that "*human raw material* is immeasurably more difficult to work than wood" (G II, 86). If this misconception of man as mere material serves technological violence, Solzhenitsyn affirms that art or *techne* which opposes the lie: "Lies can prevail against much in the world, but never art" (Nobel Lecture 497).

Another key logocentric assumption is that speech, rather than writing, manifests truth, being, and personal presence.³³

This is why Solzhenitsyn, examining truth in its mode of revelation, emphasizes speech and hearing. “Only a stone ear could fail to hear the lie” (FC, 235), observes Nerzhin in *The First Circle*. In *Gulag* Solzhenitsyn quotes a Russian proverb: “When hunger takes hold, the voice will appear”—a saying belied by the fact that, “among us, among our natives, it did not. Even from hunger” (G II, 308). It seems plausible that Solzhenitsyn considers the unconstrained voice as the authentic expression of the human essence. “A human being,” observes Kondrashev, “possesses from his birth a certain essence, the nucleus, as it were, of this human being.” Kondrashev calls this essence his “I” or his “image of perfection” (FC, 297). Thus subjectivity is expressed through language, specifically the vocalization of the “I.”

The major revelations in the writing of Solzhenitsyn frequently involve the transmission of voice and the possession of its truth through intuitive auditory understanding. As a boy, Nerzhin (like Solzhenitsyn in G III, 21) rejected what he had read about the saboteur engineers; intuitively he could “see that it was all a lie.” (FC, 234) While here writing (and sight) is the means of truth, there follows the statement that “only a stone ear could fail to hear the lie.” *The First Circle* climaxes in Spiridon’s spoken narrative, which overpowers Nerzhin with its simplicity and wisdom (in Russian, *Spiridon* means spirit). This is not to deny that speech, by constraint or duplicity, contains untruth. However, in *Gulag I*, Solzhenitsyn discovers an auditory-spiritual faculty for determining the integrity of any speaker. While in prison he recklessly “revealed” himself in conversation to dozens of people, “but didn’t make a mistake once.” He adds that “such spiritual sensors exist in many of us, but because we live in too technological and rational an age, we neglect this miracle and don’t allow it to develop” (G I, 186).

The most memorable auditory revelation in *The First Circle* is received by the doomed diplomat Volodin. In the first chapter he phones Dr. Dobroumov to warn him he is about to be arrested. Because of Dobroumov’s wife’s distrust of the unidentified caller, Volodin’s attempt fails—an example perhaps of that insensitivity to voice for which Solzhenitsyn blames modern technology. The rest of the novel focuses largely on the state’s attempt to track Volodin down by means of telephone tapes.

Meanwhile Volodin's new allegiance to truth and morality is fostered by his reading of his dead mother's letters. The authority of these letters is increased by their transformation into speech which holds the essence and presence of her personality. "The son felt not as if he were reading, but as if he were listening to his mother speaking in her brittle voice." So Innokentii "came to understand her; just as the essence of food cannot be conveyed in calories, the essence of life will never be captured by even the greatest formulas" (FC, 397, 399).

The First Circle is Solzhenitsyn's most sustained examination of *logos* and technology, its setting being an acoustics laboratory within a Soviet prison institute. These engineers are engaged in the construction of a telephone encoder, which scrambles the human voice, and development of the new (and as yet non-existent) science of "phonoscopy," which would enable the state to use voice prints to track down its enemies. Apart from the enslavement of engineers for totalitarian ends, Solzhenitsyn represents technology's failure through fetishization of abstract formulas to comprehend what he considers the essence of the human voice. Phonoscopy would discover "what makes a human voice unique" (FC, 23)—a task never before undertaken in history. The Mavrino technicians and their supervisors have succumbed to Whitehead's fallacy of misplaced concreteness. Their tables, formulas, and classifications miss precisely what makes a human voice unique and human—its power to awaken in one human being the intuition of another "I," an individual subjectivity. Solzhenitsyn's ideal form of intersubjective communication is direct, unconstrained, and "unmediated" conversation such as Nerzhin and Rubin, unlike other Russians, are able to enjoy at the Mavrino *sharashka*, and which defines a fundamental human norm amid technological insanity. In privileging the immediacy, presence, and truth of the voice, Solzhenitsyn distrusts not only writing but all technological means of vocal transmission, not least the telephone. Yet even these machines can transmit the essence of the "I" if one has "spiritual sensors" to hear it. When Rubin first hears the tape of Volodin's voice, he realizes this man is no criminal. But ideology compels him to use technology to track the man down (FC, 224-226).

Now we can understand the imaginative brilliance of those machines, the vocoder, clipper, and absolute encoder, which Stalin demands from the Mavrino engineers. The very concept of these machines (all of which exist) is so perverse that they contribute powerfully to the novel's atmosphere of nightmare and hallucination. The encoder and clipping machine are to scramble Stalin's telephone conversations so that "no one could understand [them] . . . even if they were monitored" (FC, 51). The "absolute encoder" is to "assure by mechanical rotation the operation of banks of relays which would take the separate impulses into which speech had been chopped up and so scramble them so that not even hundreds of technicians with hundreds of decoders could decipher a conversation on the wire" (FC, 198). According to Solzhenitsyn's intrusive narrator, "clipping, damping, amplitude compression, electronic differentiation, and integration of normal human speech" constitute "engineering desecrations" (FC, 58). Nonetheless, the great scientist Chelnov tells Sologdin that, though built on the "principle of chaos," his first model of the absolute encoder is too systematic. He should build one in which chaos is "chaotically changed" (FC, 202).

These machines, with the science of phonoscopy, are Solzhenitsyn's ultimate symbols of the perversion of *technē* and *logos*. Though the purpose of phonoscopy is to identify the individual voice, its real goal is to create a climate of moral fear so intense that it would eliminate all speech other than that which serves technology and the state. In short, it would annihilate human subjectivity by severing its inseparable connection with the voice. This too is the aim of the Soviet prison camps, whose "whole strength" (G III, 220-221) is the repression of speech, and where the system "tended to break down" because the prisoners "heard each other's voices" (G III, 60). As for the encoder, the scrambling of voices implies more than the disfigurement of *logos* and selfhood. It symbolizes the withdrawal of truth from public life and its replacement by gibberish. There is irony in Chelnov's desire to build the encoder on the principle of chaos. Considered purely as a political technique, the encoder is one more means of control. But for Solzhenitsyn this order is founded on the chaos of unreason, of

which Satan—and now Stalin—has been the symbol in Western tradition.

Solzhenitsyn's works would be merely depressing if they fully confirmed Ellul's predictions, but in fact their very existence proves that technology's domination of man is not yet complete. To be sure, in the last volume of *Gulag*, Solzhenitsyn doubts that there was any true "thaw" (G III, 492, 493, 482, 283) after Stalin. Though diminished in population and perhaps "weakened" (G III, 243) in its apparatus, the Archipelago is "continually replenished" (G III, 522) even today, and the law and the police are prepared for any increase in political repression. Yet this volume celebrates the prisoner's ability to evade and "disrupt" (G III, 191) the prison system by ingenious technical means. Apart from work stoppage and hunger strikes (G III, 251, 282), which succeed in improving prison conditions, a complex "technology" and "theory" (G III, 125, 123, 139, 141) of escape emerges during the 1950's, the "age of rebellion" (G III, 233). Unlike the inflexible methods of the Soviet jailors, this technique is unsystematic, spontaneous, and individualistic, giving the prisoners joy in communal work and pride in workmanship.³⁴ Solzhenitsyn admires the rebel prisoners' technical achievements during the failed Kengir revolt: weapons, a lighting system, a hydro-electric station, loudspeakers, balloons (to carry messages). In more isolated regions of Russia banished *kulaks*, Old Believers, and others reconstitute true societies and return to a level of competent, if primitive, technology—perhaps the basis for a new Russia.³⁵

There is another reason why technology fails to win ultimate control over man. Solzhenitsyn never loses faith in the individual's intuitive spiritual capacity to comprehend the truth and to transmit it through speech. The ultimate sources of truth and authority in his works are increasingly found in realms which the state finds most difficult to control or penetrate: the folk tradition, oral exchange, dreams, and personal memory. As Andrej Kodjak remarks, not only Volodin's mother's voice but "all of the messages countering Stalin issue from authoritative sources for the most part as distant as the dictator himself."³⁶

However, Solzhenitsyn's reliance on such remote voices poses problems. Although their historical priority may grant them greater authority than Stalin's, these speakers are indeed

“distant” and therefore absent, and so Solzhenitsyn must counterfeit their immediacy in order to make them seem truly present and authoritative: Volodin reads his mother’s letters, but he also hears her voice. Only such a fiction of presence and immediacy permits Solzhenitsyn to distinguish this “auditory” experience from a telephone conversation; actually, in both cases the speaker is absent and his voice is mediated, whether by print or by electronics.

To this fiction of vocal presence Solzhenitsyn conjoins a basic authoritarianism reflected in his love of tradition and the institutions of the Russian past. As Kodjak says, the “divine [auditory] revelations” in Solzhenitsyn “really have the status of dogma,” for they are not “open to analysis,” and the characters must follow them without question (Kodjak 130). This mystique is consistent with logocentrism, which is often found embedded in patriarchy, hierarchical, and authoritarian politics. One can thus conclude that Solzhenitsyn’s logocentrism, in his attack on Stalin’s technological and political abuses, serves freedom, individuality, and truth. Nonetheless, it might also serve as the foundation of a new authoritarian rather than totalitarian order in which *techne* will be safely installed and directed from within a traditional political and religious hierarchy.³⁷

NOTES

1. Jacques Ellul, *The Technological Society*, trans. John Wilkinson (New York: Alfred Knopf, 1964), hereafter referred to as Ellul and cited in the text wherever possible. See pages 4, 6, 12, 14, 31, 82, 89, 116, 128, 233, 237, 254, 260.
2. Ellul 83, 232, 260. On the transformation of politics into technique, see Langdon Winner, “Techne and Politeia: The Technical Constitution of Society,” in *Philosophy and Technology*, ed. Paul T. Durbin and Fredrick Rapp (Dordrecht and Boston: W. Reidel, 1983) 97, 98, 109.
3. The following is a list of abbreviations of works by Solzhenitsyn cited in the text and footnotes: 1914: *August, 1914*, trans. Michael Glenny (New York: Farrar, Straus, and Giroux, 1972); CW: *Cancer Ward*, trans. Nicholas Bethell and David Burg (New York: Bantam, 1981); FC: *The First Circle*, trans. Thomas P. Whitney (New York: Bantam, 1982); G: *The Gulag Archipelago, 1918-1956: An Experiment in Literary Investigation*, 3 vols., trans. Thomas P. Whitney (New York: Harper and Row, 1974, 1975, 1979). Volumes I, II, and III are indicated in Roman numerals in the abbreviations, e.g. G I, 211.

4. See G II, 124; G, III, 49, 390; FC, 97. See also G, III, 91, 94, on totalitarianism and its impulse towards "compression."
5. See also G, II, 339, 340.
6. Michael Scammell, *Solzhenitsyn: A Biography* (New York: W.W. Norton, 1984) 939; hereafter cited as Scammell.
7. Hannah Arendt, *The Origins of Totalitarianism*, III (New York: Harcourt, Brace and World, 1968) 109, 142, 107, 102, 129, 94, 97, 99, 107, 109, x, lx, 19-20, xv, xviii, xvi. See also G, III, 63-4, 354-5.
8. On the pre-Communist engineers and their ambivalent relationship to the Bolsheviks and proletariat, see Kendall E. Bailes, *Technology and Society under Lenin and Stalin: Origins of the Soviet Technical Intelligentsia, 1917-1941* (Princeton: Princeton University Press, 1978) 19-43; hereafter cited as Bailes.
9. Bailes 44-5, Bailes finds a trend toward professional independence and technocracy among the older Soviet engineers in the late 1920's. See also Bruce Parrot, *Politics and Technology in the Soviet Union* (Cambridge: MIT Press, 1983) 30-4.
10. G, I, 31, 43, 73, 335-8, 374, 375. See Bailes on the "Shakhty Affair" and the "Industrial Party Affair," pages 69-94, 95-121.
11. G, I, 48; Bailes 135, 141-7, 150, 154-5; Scammell 224-5.
12. But Langdon Winner emphasizes the difficulty of determining such "rational" ends; see his *Autonomous Technology: Technics-Out-Of-Control as a Theme in Political Thought* (Cambridge, Massachusetts: MIT Press, 1977) 242; hereafter cited as Winner.
13. For the intellectual variety of at least some of the engineers' interests, see Bailes, pages 105-6.
14. Typified by Lunacharsky, and seeking a "socialist humanism" in Soviet education, the old engineers abhorred narrow specialization and favored the arts and humanities. After 1928 they and their values were thoroughly defeated by Stalin, who despised bookishness, impracticality, and theory, and who desired specialization among the new (and loyal) corps of engineers (the "Red Experts"). See Bailes 159-87, 69, 160, 163, 119, 186.
15. See Veblen, *The Engineers and the Price System* (New York: Viking, 1954). Since Bacon, the technocrat has viewed power not so much as a political force but as the irresistible power of nature, which only the technocrat knows how to comprehend, harness, and transmit. Insofar as the technocrat generally discounts the public's opinion, his attitudes are in reality authoritarian, and Solzhenitsyn is no exception to this rule. See Winner 139-40, 146-7. Yet Solzhenitsyn's support of technocratic authority has limits. See Scammell 565.
16. In *Gulag* Solzhenitsyn resents the engineer's subordination to the incompetent worker. But since the 1930's, the technocratic intelligentsia has "gained the upper hand" over the working class and achieved extraordinary power in industry and the state. Such men are not autonomous, however, but loyal functionaries of the state. See Bailes 6, 412-19.
17. The charges of wrecking were probably trumped up. See Bailes 95-8. But Ellul's basic point is correct, for the engineer's trial resulted from the Soviet state's suspicion of a budding technocracy.
18. Bailes argues that the persecution of the engineers had technical and economic results whose bad effects are still felt. But Winner denies that Stalin largely ignored principles of rational efficiency and organization except as they increased state power. Judged in terms of increased pro-

- ductivity, efficiency, economic growth, etc., the state is a "remarkable success." Given Stalin's goal of rapid modernization, the waste of Soviet manpower was unavoidable, relatively economical, and efficient. See Bailes 71, 95, 122, 420; Winner 272.
19. Ellul 96-7, 41, 74, 116.
 20. See Stephen Carter, *The Politics of Solzhenitsyn* (London: MacMillan, 1975) 60, 61, 88, 100; hereafter cited as Carter.
 21. See Carter 88, 90, 91, 92, 100; Scammell 380, 865, 866.
 22. See Philip Rahv, "In Dubious Battle," *New York Review of Books*, October 15, 1972: 13-15.
 23. Winner makes this point; see pages 258, 262.
 24. See Bailes 408, 424; Winner 130, 273.
 25. See Carter 103-4, 122-3, 125, 131-2, 149.
 26. CW, 357. See also G III, 351-2, and Carter 50.
 27. Solzhenitsyn's Harvard Speech of 1976 traces numerous modern evils to Renaissance humanism. See Scammell 968.
 28. See John Herman Randall, *Aristotle* (New York: Columbia University Press, 1968) 6-7, 77-8, 187-8, 272-8, 298-300.
 29. Wylie Sypher, *Literature and Technology: The Alien Vision* (New York: Alfred Knopf, 1968) xviii, xix, 22, 28, 71-2.
 30. See Winner 98, 118, 200.
 31. See Donald Fanger, "Solzhenitsyn: Art and Foreign Matter," in *Alexander Solzhenitsyn: Critical Essays and Documentary Materials*, ed. J.B. Dunlop et al. (Belmont, Massachusetts: Nordland Publishing Co., 1973) 158-9.
 32. Solzhenitsyn, "Nobel Lecture," in *Alexander Solzhenitsyn: Critical Essays and Documentary Materials* 497.
 33. Jacques Derrida, *Of Grammatology*, trans. Gayatri Spivak (Baltimore: Johns Hopkins University Press, 1976) 6-26, and *passim*.
 34. See G III, 204.
 35. G III, 304-6, 307, 308, 317, 320, 366-7.
 36. See Andrej Kodjak, "Political Conversion in Solzhenitsyn's Fiction," *Modern Fiction Studies* 23 (Spring 1977): 129. See also G III, 99, 413.
 37. In *Letter to the [Soviet] Leaders* (1974) Solzhenitsyn favors an authoritarian national government without political parties but with representation through soviets and with an emphasis on the traditional moral role of Russian Orthodoxy. Some argue that he supports censorship of the press. Actually, Solzhenitsyn lacks an all-embracing political ideology. He believes that authoritarianism is inherently Russian, yet he praises Swiss democracy, and he claims to believe in government by consent and to oppose censorship, however hard it is to reconcile these positions with his authoritarianism. Nowhere does he support a return to Tsarist autocracy, as some think, and he rejects the charge that he is "advocating a patriarchal form of society dominated by Russian orthodoxy." See Carter 58, 62, 63, 72, 74, 98, 99, 100, 135; Scammell 668, 766, 867, 883, 968.